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09/714,144	11/17/2000	Yosuke Hoi	0505-0714P	5531

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/714,144

Applicant(s)

HOI ET AL.

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because there should not be lines connecting two different figures as done by Applicant (with lines 72 and 73) between figures 7d and 7c. See MPEP 608.02(h). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

### ***Specification***

3. The disclosure is objected to because of the following informalities:
  - On pg. 1 line 9 the phrase "the present invention" makes it appear as if Applicant is referring to limitations of the instant application instead of the prior art.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-6 and 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 1-6 and 8-17. The phrase "dry sump **type** engine" in the claims is unclear as it fails to define the metes and the bounds of the claim recitation.

Re: claims 3, 4, 14, and 15. Claim 8 recites the limitation "said L-shaped body" in line 5. There is insufficient antecedent basis for this limitation in the claim. Examiner recommends maintaining consistent terminology since there is a difference between "L-shaped" and "generally L-shaped" and since Applicant is arguing "L-shaped" and not "generally L-shaped".

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5339776 to Regueiro.

Re: claim 1. Regueiro shows in figure 1 a lubricating apparatus capable of being used for a dry sump type engine comprising: a cylindrical relief valve 54, the cylindrical relief valve being disposed in parallel to a main gallery 22 and portions of a crank shaft 24 of the engine as shown in figure 1.

Re: claim 2. The bases of the cylindrical relief valve of Regueiro are disposed in a horizontal direction.

Re: claim 6. Regueiro shows in figure 1 the lubricating apparatus comprising an oil tank 14 and a strainer 15 capable of being used for straining oil recovered in the oil tank, the strainer being provided in the oil tank.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regueiro in view of US Patent 4638856 to Yamanaka et al.

Re: claims 3-5. Regueiro discloses and shows in figure 1 the relief valve comprising a cylindrical valve body unnumbered as shown received within a body or surrounding portion in the area of element number 54 including a discharge port 21 formed therein, wherein when hydraulic pressure within the main gallery becomes a predetermined value, the cylindrical valve body is operated to open the discharge port to relieve the hydraulic pressure, but does not disclose the specific limitation of the body being a generally L-shaped body with the other specific structural details of the valve body shape.

Yamanaka et al. teaches in figure 1 the use of a relief valve 56,57 having a generally L-shaped body 57 including a long pipe or portion above element number 57b, a short pipe or portion below and extending to the left of element number 57b, a stopper or shoulder in the area of the lead line associated with element number 56a for restricting movement of the cylindrical valve body in the long pipe, a spring 56b for biasing the cylindrical valve body toward the stopper, a spring stop 56c for pressing the spring, and a mounting portion (or flange portion of the short pipe portion shown extending below element number 57b). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the body of the relief valve of Regueiro to have been generally L-shaped, as taught by Yamanaka et al. or any appropriate shape as best determined based on the arrangement of surrounding structures in the engine in order to provide a pressure adjusting means efficiently positioned to make the best use of the interior real estate of the engine. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valve of Regueiro to have included the specific spring and stopper arrangement, as taught by Yamanaka et al., in order to provide a means of properly opening and closing the discharge port to efficiently regulate the fluid flow based on pressure.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5778848 to Takahashi et al. in view of Yamanaka et al. and US Patent 4928641 to Niizato et al.

Re: claim 8. Takahashi et al. shows in figure 1 a lubricating apparatus capable of being used for a dry sump type engine comprising an oil tank 58 and a relief valve 73 provided in the oil tank wherein the relief valve further comprises: a lead pipe 72 being connectable with an outlet pipe 66 of an oil filter 71 the relief valve having the limitation wherein when hydraulic pressure within the main gallery becomes a predetermined value, the relief valve relieves the hydraulic pressure. Yamanaka et al. teaches the use of a lead pipe with a discharge port 55 formed therein, a cylindrical valve body 56a movable received within a generally L-shaped body to open and close the discharge port. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the relief valve of Takahashi et al. to have included a detailed construction, as taught by Yamanka et al., as it is a well-known arrangement of a relief valve to enable accurate metering of the pressure in the lubricating apparatus. Niizato et al. teaches in figure 6 the use of an L-shaped valve path 59,55,57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valve body of Takahashi et al., as modified, to have included an L-shape, in view of the teachings of Niizato et al., in order to provide a means of efficiently utilizing the real estate in the area of the relief valve.

11. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5778848 to Takahashi et al. in view of Yamanaka et al.

Re: claims 9 and 10. Takahashi et al. shows in figure 1 a lubricating apparatus capable of being used for a dry sump type engine comprising an oil tank 58 and a relief valve 73 provided in the oil tank wherein the relief valve further comprises: a lead pipe

72 being connectable with an outlet pipe 66 of an oil filter 71 the relief valve having the limitation wherein when hydraulic pressure within the main gallery becomes a predetermined value, the relief valve relieves the hydraulic pressure. Yamanaka et al. teaches the use of a lead pipe with a discharge port 55 formed therein, a cylindrical valve body 56a movable received within a generally L-shaped body to open and close the discharge port. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the relief valve of Takahashi et al. to have included a detailed construction, as taught by Yamanka et al., as it is a well-known arrangement of a relief valve to enable accurate metering of the pressure in the lubricating apparatus. Takahashi et al., as modified, teach the use of a stopper or valve seat (See col. 5 line 53 of Yamanaka et al.) for restricting movement of the cylindrical valve body, a spring 56b for biasing the cylindrical valve body toward the stopper, and a spring stop 56c for pressing the spring. See Yamanaka et al. figure 1.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5778848 to Takahashi et al. in view of Yamanaka et al. as applied to claim 9 above, and further in view of WIPO 99/14109 to Matsuto et al. (using US Patent 6158543 as an English equivalent throughout the Office Action). Matsuto et al. teach in figure 6 the use of a lubricating apparatus comprising: an oil tank 101 and a strainer 106 provided in the oil tank. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the lubricating apparatus of Takahashi et al., as modified, to have included a strainer in the oil tank, as taught by



Matsuto et al., in order to provide a means of straining oil recovered in the oil tank to help rid the oil of debris.

13. Claims 12, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regueiro in view of Nanami et al.

Re: claim 12. Regueiro shows in figure 1 an engine comprising: a crank shaft 24 mounted for rotation therein, a main gallery 22 extending in a longitudinal direction parallel to portions of the crank shaft and a cylindrical relief valve 54, the relief valve being disposed in parallel to the main gallery and the crank shaft, but does not disclose that the engine is specifically of the dry sump type. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the engine of Regueiro to have included a dry sump type engine, as taught by Nanami et al., in order to provide advantageous oil control to the pump pick up to help prevent bearing failures due to oil starvation.

Re: claim 13. Regueiro shows in figure 1 the bases of the relief valve being disposed in a horizontal direction.

Re: claim 17. Regueiro shows in figure 1 an oil tank 14 and a strainer 15 being provided in the oil tank.

14. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Regueiro in view of Nanami et al. as applied to claim 12 above, and further in view of Yamanaka et al. Regueiro discloses and shows in figure 1 the relief valve comprising a cylindrical valve body unnumbered as shown received within a body or surrounding portion in the area of element number 54 including a discharge port 21 formed therein,

wherein when hydraulic pressure within the main gallery becomes a predetermined value, the cylindrical valve body is operated to open the discharge port to relieve the hydraulic pressure, but does not disclose the specific limitation of the body being a generally L-shaped body with the other specific structural details of the valve body shape.

Yamanaka et al. teaches in figure 1 the use of a relief valve 56,57 having a generally L-shaped body 57 including a long pipe or portion above element number 57b, a short pipe or portion below and extending to the left of element number 57b, a stopper or shoulder in the area of the lead line associated with element number 56a for restricting movement of the cylindrical valve body in the long pipe, a spring 56b for biasing the cylindrical valve body toward the stopper, a spring stop 56c for pressing the spring, and a mounting portion (or flange portion of the short pipe portion shown extending below element number 57b). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the body of the relief valve of Regueiro to have been generally L-shaped, as taught by Yamanaka et al. or any appropriate shape as best determined based on the arrangement of surrounding structures in the engine in order to provide a pressure adjusting means efficiently positioned to make the best use of the interior real estate of the engine. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valve of Regueiro to have included the specific spring and stopper arrangement, as taught by Yamanaka et al., in order to

provide a means of properly opening and closing the discharge port to efficiently regulate the fluid flow based on pressure.

### ***Response to Arguments***

15. Applicant's arguments filed 6/11/02 have been fully considered but they are not persuasive. With regard to the phrase "the present invention", Examiner recommends providing the clarification that Applicant has provided in the Remarks in the present specification to avoid confusion when reading "present invention" but seeing the "Related Art" label for figures 8 and 9. With regard to the use of Yamanaka et al. for the teaching of the generally L-shaped relief valve. Examiner maintains that the arguments are different from the recited claim language. The claim calls for a relief valve having a generally L-shaped body as claimed, for example, in claim 3 which depends from claim 1 in which claim the relief valve itself is recited as being "cylindrical" see line 2 of claim 1. Examiner, therefore, maintains that the Yamanaka et al. shows a cylindrical relief valve comprising a generally L-shaped body to the same extent as Applicant's. The arguments with regard to claims 1 and 12 are moot in view of the new grounds of rejection.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent: 4813408 to Katsumoto et al., 4942855 to Muto, 6192682 to Smothers et al., 5231961 to Shimada et al., and Abstract and

accompanying drawing to patent SU-1468087 teach lubricating systems including a relief valve disposed parallel to the main gallery.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

*mmb 8/26/02*  
mmb  
August 26, 2002

*M. C. Graham*  
8/26/02  
**MATTHEW C. GRAHAM**  
**PRIMARY EXAMINER**  
**GROUP 310**